

**Claims:**

1. A hearing device with at least one acoustical to electrical converter, at least one electrical to mechanical converter, at least one signal processing unit and with an electrical supply unit, wherein said electrical supply unit and said electrical to mechanical converter are incorporated within a first module, said acoustical to electrical converter and said signal processing unit are incorporated in a second module and wherein said first and said second modules are assembled in a disassemblable manner.
2. The hearing device of claim 1, wherein said electrical supply unit and said electrical to mechanical converter are unremovably integrated in said first module, said first module being as a whole an exchange part.
3. The hearing device according to one of the claims 1 or 2, wherein said first module comprises an On/Off control arrangement for said hearing device.
4. The hearing device of one of claims 1 to 3, wherein said second module comprises a control unit for said signal processing unit.
5. The hearing device according to one of the claims 1 to 4, being a hearing aid device and thereby one of an In-The-Ear hearing aid device and of an Outside-The-Ear hearing aid device.
6. The hearing device of one of the claims 1 to 5, wherein said power supply is one of a non-rechargeable

**Figure 1**

Figure 1 displays two sets of histograms comparing the distribution of the number of nodes per cluster ( $n_c$ ) for different network types. The top row shows results for the "Real" dataset, and the bottom row shows results for the "Synthetic" dataset. Each set contains three histograms corresponding to different values of  $\alpha$ :  $\alpha = 0.7$  (left),  $\alpha = 0.8$  (middle), and  $\alpha = 0.9$  (right). The x-axis for all plots is labeled " $n_c$ " and ranges from 0 to 10. The y-axis represents frequency, ranging from 0 to 10. In the "Real" dataset, the distributions are generally skewed towards lower values of  $n_c$ , with peaks around 1-2. In the "Synthetic" dataset, the distributions are more uniform across the range of  $n_c$ .

- 20 -

battery arrangement and of a rechargeable accumulator arrangement.

7. The hearing device of one of the claims 1 to 6, wherein said power supply unit at said first module is exchangeable at said first module.

8. The hearing device of one of the claims 1 to 7, wherein said first and second modules are assemblable and disassemblable by means of one of a bayonet-type interconnection, a screwing interconnection, a snap interconnection.

9. A hearing device according to one of the claims 1 to 8, further comprising a code unit in or at said first module and a code-reader and decoding unit at or in said second module, the output of said code-reader and decoder unit being operationally connected to at least one control input of an electronic unit within said second module.

10. The hearing device according to one of the claims 1 to 9, further comprising an electronic unit within said first module, said electronic unit being specifically conceived for said electrical supply unit and said electrical to mechanical converter within said first module.

11. A set of hearing devices, each with at least one acoustical to electrical converter, at least one electrical to mechanical converter, at least one signal processing unit and an electrical power supply unit, wherein said electrical power supply unit and said electrical to mechanical converter of each of said hearing devices are incorporated in a first module, said acoustical to electrical converter as well as said signal processing unit

- 21 -

are incorporated in a second module, said respective first and second modules being assembled in a disassemblable manner at each of said hearing devices, said hearing devices having different acoustical to mechanical transmission powers, said second modules of said hearing devices being the same modules, and said first modules of said hearing devices being different modules.

12. The set according to claim 11, wherein at least one first module of a hearing device of said set has an electrical supply unit and an electrical to mechanical converter, which are unremovably integrated in said first module, said respective first module being integrally an exchange part.

13. The set of one of claims 11 or 12, wherein a first module of at least one of said hearing devices forming said set has an On/Off control arrangement for said respective hearing device.

14. The set according to one of the claims 11 to 13, wherein at least one second module of said hearing devices belonging to said set has a control arrangement for externally controlling said signal processing unit.

15. The set of one of the claims 11 to 14, said hearing devices forming said set being hearing aid devices and thereby one of In-The-Ear hearing aid devices and Outside-The-Ear hearing aid devices.

16. The set according to claims 11 to 15, wherein at least one of said first modules of said hearing devices comprises a power supply, which is a rechargeable accumulator.

- 22 -

17. The set according to one of the claims 11 to 16, wherein at least one of said first modules comprises a power supply, which is at least one battery.

18. The set of one of claims 11 to 17, wherein at least one of said first modules has a power supply, which is exchangeable from said first module.

19. The set of hearing devices according to one of the claims 11 to 18, said first modules having a code unit with a code, said codes of said first modules being different, said second modules having a code reader and decoder unit for reading and decoding said code of said first modules, the output of said code reader and decoding unit being operationally connected to at least one adjusting input of an electronic unit within said second module.

20. The set of hearing devices according to one of the claims 11 to 19, further comprising an electronic unit respectively within said first modules and wherein said electronic units of said first modules are different.

21. A method for manufacturing a hearing device, comprising

- assembling an electrical power supply and an electrical to mechanical converter to a first module;
- assembling an acoustical to electrical converter and a signal processing unit to a second module;
- assembling said first and second module to substantially form said hearing device in a manner said modules may be disassembled without destroying at least said second module.

- 23 -

22. The method of claim 21, further comprising the step of unremovably integrating said electrical supply unit and said electrical to mechanical converter into said first module as an integrally formed exchange part of said hearing device.

23. The method of claim 21 or 22, further comprising the step of providing an On/Off control for said hearing device in said first module.

24. The method of one of claims 21 to 23, further comprising the step of integrating in said second module a control unit for externally controlling said signal processing unit.

25. The method of one of claims 21 to 24, further comprising manufacturing a hearing aid device being one of an In-The-Ear hearing device and of an Outside-The-Ear hearing device.

26. The method of one of claims 21 to 25, further comprising the step of assembling into said first module one of at least one un rechargeable battery and of a rechargeable accumulator as said power supply unit.

27. The method of one of claims 21 to 26, further comprising the step of providing said power supply in said first module so as to be exchangeable therein.

28. The method of one of the claims 21 to 27, further comprising assembling to said first module at least one electronic unit.

29. The method of one of claims 21 to 28, further comprising providing at said first module a code and

- 24 -

providing at said second module a code reader and decoder unit, thereby operationally connecting an output of said reader and decoder unit to at least one adjusting input in said second module.

5 30. A method for upgrading an existing hearing device for individual needs having changed, comprising exchanging at said hearing device exclusively a first module, which comprises an electrical power supply and an electrical to mechanical converter of said hearing device and maintaining  
10 a second module comprising a signal processing unit and an acoustical to electrical converter.

31. The method of claim, wherein said hearing device is a hearing aid device and thereby one of an In-The-Ear hearing device and of an Outside-The-Ear hearing device.

15 32. The method of one of claims 30 or 31, further comprising exchanging said electrical power supply by exchanging said first module.

33. The method of one of the claims 30 to 32, further comprising the step of providing in said first module at  
20 least one electronic unit.

34. The method of one of the claims 30 to 33, further comprising recognizing at said second module said first module exchanged and controlling signal processing at said second module by the result of said recognizing.